



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,529	08/05/2003	Joseph A. Starr	1-21434	6057
46582	7590	08/10/2005		EXAMINER
MACMILLAN, SOBANSKI & TODD, LLC ONE MARITIME PLAZA - FOURTH FLOOR 720 WATER STREET TOLEDO, OH 43604			KING, BRADLEY T	
			ART UNIT	PAPER NUMBER
			3683	

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/634,529	STARR ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Bradley T. King	3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 18 May 2005.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 6,16 and 26 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-5,7-14,19-24,29 and 30 is/are rejected.
- 7) Claim(s) 15,17,18,25,27 and 28 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) All    b) Some \* c) None of:
      1. Certified copies of the priority documents have been received.
      2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
      3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. _____.   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7-8, 10, and 31-33 are rejected under 35 U.S.C. 102(b) as being anticipated by DE 198 29 124.

DE 198 29 124 discloses all the limitations of the instant claims including; a valve seat body 4, said valve seat body having a valve passageway extending through a portion of said valve seat body, a groove 2 formed circumferentially in an outer surface of said valve seat body, said groove defining a groove surface, a bore 7 extending between said groove surface and said valve passageway to provide fluid communication between said groove surface and said valve passageway; and a substantially resilient seal 3 slidably mounted about said groove surface, said seal slidably movable between a first position substantially covering said bore and a second position exposing said bore to permit the flow of fluid within said groove to said valve passageway through said bore.

Regarding claim 2, note the valley of the groove surface is substantially cylindrical.

Regarding claim 4, the axial length of the groove at the outer periphery is greater than an axial length of said seal.

Regarding claim 5, said groove surface defines a first groove surface (the valley or one side wall), said groove further including a second groove surface (one of the side walls) adjacent said first groove surface, said second groove surface being disposed at an acute angle relative to said first groove surface.

Regarding claim 7, the angle is nearly 45 degrees.

Regarding claim 10, see figure 2.

Claims 1-4, 9-14, 19-24, 29 and 30-33 are rejected under 35 U.S.C. 102(b) as being anticipated by US 6019441.

US 6019441 discloses all the limitations of the instant claims including; a valve seat body 62, said valve seat body having a valve passageway 86 extending through a portion of said valve seat body, a groove (near 102) formed circumferentially in an outer surface of said valve seat body, said groove defining a groove surface, a bore (not labeled) extending between said groove surface and said valve passageway to provide fluid communication between said groove surface and said valve passageway; and a substantially resilient seal 102 slidably mounted about said groove surface, said seal slidably movable between a first position substantially covering said bore and a second position exposing said bore to permit the flow of fluid within said groove to said passageway through said bore.

Regarding claim 10, see figure 1.

Regarding claims 11-14 and 19-20, US 6019441 discloses an armature 74 and a coil 64.

Regarding claims 24 and 29-30, US 6019441 discloses a HCU having a housing and a bore. See figure1.

#### ***Allowable Subject Matter***

Claims 15, 17-18, 25 and 27-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

Applicant's arguments filed 5/18/2005 have been fully considered but they are not persuasive.

Regarding DE 198 29 124, it is maintained that the reference discloses a seal 3 which is slidably mounted "about" said groove surface. Note that some degree of sliding of the seal 3 is required for the valve to function and the claims do not require the seal to slide against the groove surface.

Regarding Lloyd et al, it is clear that the disclosure incorrectly identifies and describes the lip seal as element 104 (shown as 102) and the filter as element 102 (shown as 104). The drawings show a lip seal labeled 102 which functions as a check valve to close the unlabeled bores which extend between the groove surface(note the

Art Unit: 3683

walls of the groove can be considered part of the groove surface) and the valve passageway 86. It is also maintained that the seal is capable of axial movement.

It is maintained that the rejections are proper.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley T. King whose telephone number is (571) 272-7117. The examiner can normally be reached on 11:00-7:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on (571) 272-7095. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BTK

*Robert A. Siconolfi, 8/5/05*  
ROBERT A. SICONOLFI  
PATENT EXAMINER